We Claim:

1. A machine for processing flat printing material, comprising:

at least one processing station in the form of a printing unit;

a feeder for loading said at least one processing station with sheets of the printing material;

a delivery for combining the processed sheets into piles;

an auxiliary pile carrier to be displaced in an insertion direction from a standby position into an operational position and to be displaced in an opposite direction;

supporting members following one another in said insertion direction; and

axially parallel swivel joints for articulatingly connecting said supporting members directly to one another;

said supporting members having extensions projecting beyond said swivel joints, one of said extensions being directed counter to said insertion direction of a respective one of said supporting members engaging underneath one of said extensions being directed in said insertion direction of said

respective supporting member after the next trailing in said insertion direction.

2. The machine according to claim 1, further comprising a guide through which said supporting members are to be pushed for use of said supporting members, said guide holding said extension being directed counter to said insertion direction and located in said guide, in contact with said extension being directed in said insertion direction of said supporting member after the next trailing in said insertion direction.

3. The machine according to claim 2, wherein said guide forms a support for said auxiliary pile carrier.

4. The machine according to claim 2, further comprising a guide track, said auxiliary pile carrier being supported on said guide track in said standby position of said auxiliary pile carrier.

5. The machine according to claim 4, wherein said guide track rises convexly and has a lower end facing said at least one processing station.

6. The machine according to claim 4, further comprising a lifting/lowering unit for lifting and lowering said guide and said guide track jointly.

7. The machine according to claim 1, wherein said supporting members form an auxiliary pile supporting table when located in an operating position of said supporting members.

8. The machine according to claim 1, wherein said supporting members form individual rod-shaped supporting elements when located in an operating position of said supporting members.

9. A sheet-processing rotary printing press for processing flat printing material, comprising:

at least one processing station in the form of a rotary printing press printing unit;

a feeder for loading said at least one processing station with sheets of the printing material;

a delivery for combining the processed sheets into piles;

an auxiliary pile carrier to be displaced in an insertion direction from a standby position into an operational position and to be displaced in an opposite direction;

supporting members following one another in said insertion direction; and

axially parallel swivel joints for articulatingly connecting said supporting members directly to one another;

said supporting members having extensions projecting beyond said swivel joints, one of said extensions being directed counter to said insertion direction of a respective one of said supporting members engaging underneath one of said extensions being directed in said insertion direction of said respective supporting member after the next trailing in said insertion direction.